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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,050	03/18/2004	Iain Christopher Butler	SONY-27800	7987

7590 06/30/2005

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EXAMINER
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CHOE, HENRY

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/805,050

Applicant(s)

BUTLER, IAIN CHRISTOPHER

Examiner

Henry K. Choe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 13-17, 23-29, 35-41, 47 and 48 is/are rejected.
- 7) ☒ Claim(s) 7-12, 18-22, 30-34 and 42-46 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 15, 25-27 and 37-39 are rejected under 35 U.S.C. 102(b) as being anticipated by applicant's admitted prior art (Fig. 1 of drawing).

Regarding claim 1, applicant's admitted prior art (Fig. 1 of drawing) discloses an amplifier circuit comprising a grounded source operational amplifier circuit (MP30, MP38, MP48, MP37, INP, INN, upper operational amplifier, MN44, MN29, lower operational amplifier, input transistors MN7, MN8, MN38, MN54, MP62, MP67, MP64, MN82, MN80, MN64, MN83, MN81, MN64, MN65), and a dynamic current switching circuit (MP52, CNFB, MN48, MN46, MN56, MN57).

Regarding claims 2, 3, 5, 15, 25-27 and 37-39, the grounded source operational amplifier circuit (MP30, MP38, MP48, MP37, INP, INN, upper operational amplifier, MN44, MN29, lower operational amplifier, input transistors MN7, MN8, MN38, MN54, MP62, MP67, MP64, MN82, MN80, MN64, MN83, MN81, MN64, MN65) includes a main amplifier core circuit (MP30, MP38, MP48, MP37, INP, INN, upper operational amplifier, MN44, MN29, lower operational amplifier, input transistors MN7, MN8, MN38, MN54), a biasing circuit (MP62, MP67, MP64, MN82, MN80, MN64, MN83, MN81, MN64, MN65), an upper gain enhancement circuit including a first PMOS cascode

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(MP30), a second PMOS cascode (MP38), an AUXP operational amplifier (upper operational amplifier) and wherein the upper gain enhancement circuit maintains an upper gain bias voltage across a first PMOS current source (MP37) and a second PMOS current source (MP38), a lower gain enhancement circuit including a first NMOS cascode (MN44), a second NMOS cascode (MN29) and an AUXN operational amplifier (lower operational amplifier) and wherein the lower gain enhancement circuit maintains a lower gain bias voltage across the main input pair (MN7, MN8), and wherein the main amplifier core circuit including a first main leg (MN54, MN8, MN29, OUTP, MP38) and a second main leg (MN38, MN7, MN44, MP37, MP30).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 6, 13, 14, 16, 17, 23, 24, 28, 29, 35, 36, 40, 41, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (Fig. 1 of drawing).

Applicant's admitted prior art (Fig. 1 of drawing) discloses all the limitations in the claims except for the upper gain bias voltage is 500mV, lower gain bias voltage is 400mV, a common mode output voltage is set to 1.5V and a common mode input voltage is set to 1.1V. It would have been obvious to one of ordinary skill in the art at the

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time the invention was made to have implemented the specific values of the bias voltages and common mode voltages, since they are based on the routine experimentation to obtain the optimum operating parameters.

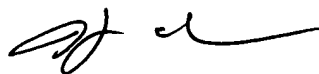
***Allowable Subject Matter***

Claims 7-12, 18-22, 30-34 and 42-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Patent numbers (6,377,120; 6,753,732; 6,522,200) are the amplifiers with the bias circuits.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (571) 272-1760.



**HENRY CHOE  
PRIMARY EXAMINER**

#1030